British Cardiovascular Society survey of waiting times
for inpatient cardiac and cardiac surgical procedures

Summary

A snapshot survey of waiting times for in-patient cardiac and cardiac surgical procedures was conducted on Wednesday 19th November 2014.

The survey suggests that there has been an improvement in waiting times for in-patient cardiac surgical and interventional procedures since a previous survey conducted by NHS Improvement in 2004-5. The survey provides some reassurance that waiting times do not differ substantially between centres with and without on-site cardiac surgery.

The survey has some limitations as data were only collected on a single day in November 2014 and average waiting times by hospital/NHS Trust may mask both short and long waiting times for individual patients. The reasons patients were waiting for inpatient cardiac or cardiac surgical procedures were not explored and in some cases patients may have been waiting for valid clinical reasons rather than for non-clinical reasons. Any regional differences in waiting times require cautious interpretation as they are based on small numbers of patients.

Although not scientifically robust, this snapshot survey found no evidence of a difference in waiting times for patients admitted to hospitals with or without on-site cardiac surgery. Further investigation is required to determine whether there are important regional differences in waiting times for in-patient cardiac and cardiac surgical procedures.
**Preamble**

The British Cardiovascular Society (BCS) promotes the effective and timely provision of care for patients with cardiovascular disease.

Patients may have to wait for cardiac procedures or for cardiac surgery for many reasons, but any wait for cardiac intervention may expose the patient to an ongoing risk from the disease that is being treated and cause the patient and his/her family anxiety and distress. The BCS therefore supports efforts to minimise clinical and non-clinical delays to treatment, including delays for inpatient cardiac interventional and surgical procedures.

In 2004 the Heart Improvement Programme surveyed 4720 patients waiting for cardiac and cardiac surgical procedures in 193 hospitals. The mean waiting time from admission to a cardiac procedure was 11.7 days. The median wait for patients with acute coronary syndrome was 9 days. The survey was repeated in 2005 and enrolled 5098 patients in 227 hospitals. The mean waiting time for a cardiac procedure had improved to 6.4 days (median wait for acute coronary syndrome 6 days) (Making Moves, 2006).

![Figure 1. Results of the Heart Improvement Programme Survey, 2004-5 (Making Moves, 2006). Bars show the median number of days waiting for a procedure.]

In 2014 the British Cardiovascular Society (BCS) was made aware of concerns that patients initially admitted to hospitals that do not have on-site cardiac surgery may have to wait longer for inpatient cardiac surgical procedures than patients who are admitted directly to hospitals with on-site cardiac surgery. Specifically there have been concerns about long waiting times for in-patient cardiac surgery, particularly among patients waiting for transfer to a cardiac surgical service from hospitals without access to on-site cardiac surgery.
Methods

The BCS, in collaboration with the British Cardiovascular Intervention Society (BCIS) carried out a snapshot survey of waiting times for in-patient cardiac and cardiac surgical procedures on Wednesday 19th November 2014 (Appendix 1). Waiting times may be longer for patients admitted over a weekend, but shorter for patients admitted later during the working week. Although such variation in waiting times will influence bed occupancy and patient experience, the survey was deliberately conducted on a weekday to minimise any effect of weekends on waiting times. The survey was coordinated with the assistance of the network of BCS/RCP Regional Specialty Advisors.

The Regional Specialty Advisors were asked to coordinate collection of information about hospital in-patients waiting for cardiac and cardiac surgical procedures at each hospital in their area. To obtain reliable information about the number of in-patients waiting for procedures and to avoid double counting of cases at non-interventional and interventional centres the Regional Specialty Advisors were requested to cross check numbers and patients across more than one site. Waiting times were recorded as the total number of days waiting for a cardiac surgical or cardiac procedure and included waiting over weekends. Completed survey forms were returned to the BCS for analysis.

Results

BCS received 84 completed survey forms, which recorded activity at 110 hospitals in the UK (Appendix 2). Survey forms covered activity at 12 hospitals in Northern Ireland but no forms were returned from Scotland or from Wales.

In England no data were submitted for Birmingham, Sandwell and Solihull; Black Country; North Central London; North West London; and Shropshire & Staffordshire.

Of the 84 survey forms, 69 related to services that provide coronary arteriography, 43 to services that provide percutaneous coronary intervention (PCI) and 17 to services that provide cardiac surgery. The majority of services (72) provide permanent pacemaker implantation and over half (45) provide a complex device service (implantable cardioverter defibrillators and cardiac resynchronisation device implantation).

Staff were employed to coordinate scheduling by 40 services (48%) and a system for monitoring delays for cardiac and cardiac surgical procedures was available at 49 services.

The tables and bar charts show the survey results for separate cardiac and cardiac surgical procedures.
Waiting times for in-patient coronary arteriography: percutaneous coronary intervention.

The table shows waiting times for all patients, stratified by type of cardiology service.

<table>
<thead>
<tr>
<th>N=286 patients</th>
<th>Mean wait (days)*</th>
<th>Median wait (days)#</th>
<th>Range of mean waits (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>2.4</td>
<td>2</td>
<td>0-8</td>
</tr>
<tr>
<td>Surgical centre</td>
<td>2.0</td>
<td>2</td>
<td>0-5</td>
</tr>
<tr>
<td>Non-surgical centres</td>
<td>2.1</td>
<td>2</td>
<td>0-8</td>
</tr>
<tr>
<td>Intervention centres</td>
<td>1.9</td>
<td>2</td>
<td>0-5</td>
</tr>
<tr>
<td>Non-intervention centres</td>
<td>3.3</td>
<td>3</td>
<td>0.5-8</td>
</tr>
</tbody>
</table>

* mean of means, weighted by number of patients waiting at each hospital
# median of mean waits

The figure shows mean waiting times by region. Numbers in parentheses are number of patients waiting in that region.
Waiting times for in-patient percutaneous coronary intervention.

The table shows waiting times for all patients, stratified by type of cardiology service.

<table>
<thead>
<tr>
<th>N=32 patients</th>
<th>Mean wait (days)*</th>
<th>Median wait (days)#</th>
<th>Range of mean waits (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>1.7</td>
<td>1</td>
<td>0-5</td>
</tr>
<tr>
<td>Surgical centre</td>
<td>1.2</td>
<td>1</td>
<td>0-5</td>
</tr>
<tr>
<td>Non-surgical centres</td>
<td>2.1</td>
<td>2</td>
<td>1-4.5</td>
</tr>
<tr>
<td>Intervention centres</td>
<td>1.5</td>
<td>1</td>
<td>0-5</td>
</tr>
<tr>
<td>Non-intervention centres</td>
<td>2.0</td>
<td>2</td>
<td>1-4.5</td>
</tr>
</tbody>
</table>

* mean of means, weighted by number of patients waiting at each hospital
# median of mean waits

The figure shows mean waiting times by region. Numbers in parentheses are number of patients.
Waiting times for in-patient coronary bypass surgery.

The table shows waiting times for all patients and stratified by type of cardiology service.

<table>
<thead>
<tr>
<th>N=127 patients</th>
<th>Mean wait (days)*</th>
<th>Median wait (days)#</th>
<th>Range of mean waits (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>9.7</td>
<td>10</td>
<td>0-28</td>
</tr>
<tr>
<td>Surgical centre</td>
<td>9.0</td>
<td>9</td>
<td>1.3-14</td>
</tr>
<tr>
<td>Non-surgical centres</td>
<td>10.4</td>
<td>10</td>
<td>1-28</td>
</tr>
<tr>
<td>Intervention centres</td>
<td>9.7</td>
<td>10</td>
<td>1.3-27</td>
</tr>
<tr>
<td>Non-intervention centres</td>
<td>9.8</td>
<td>9</td>
<td>1-28</td>
</tr>
</tbody>
</table>

* mean of means, weighted by number of patients waiting at each hospital
# median of mean waits

The figure shows mean waiting times by region. Numbers in parentheses are number of patients.
Waiting times for other cardiac surgery.

The table shows waiting times for all patients, stratified by type of cardiology service.

<table>
<thead>
<tr>
<th>N=73 patients</th>
<th>Mean wait (days)*</th>
<th>Median wait (days)#</th>
<th>Range of mean waits (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>8.8</td>
<td>10</td>
<td>0-30</td>
</tr>
<tr>
<td>Surgical centre</td>
<td>8.1</td>
<td>11</td>
<td>0-12.2</td>
</tr>
<tr>
<td>Non-surgical centres</td>
<td>9.5</td>
<td>7</td>
<td>0-30</td>
</tr>
<tr>
<td>Intervention centres</td>
<td>8.2</td>
<td>7</td>
<td>0-30</td>
</tr>
<tr>
<td>Non-intervention centres</td>
<td>11.9</td>
<td>10</td>
<td>3-30</td>
</tr>
</tbody>
</table>

* mean of means, weighted by number of patients waiting at each hospital
# median of mean waits

The figure shows mean waiting times by region. Numbers in parentheses are number of patients.
Waiting times for device implantation.

The table shows waiting times for all patients, stratified by type of cardiology service.

<table>
<thead>
<tr>
<th></th>
<th>N=102 patients</th>
<th>Mean wait (days)*</th>
<th>Median wait (days)#</th>
<th>Range of mean waits (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td>4.4</td>
<td>2.3</td>
<td>0-32</td>
</tr>
<tr>
<td>Surgical centre</td>
<td></td>
<td>1.4</td>
<td>2</td>
<td>0.5-32</td>
</tr>
<tr>
<td>Non-surgical centres</td>
<td></td>
<td>5.0</td>
<td>2.4</td>
<td>0-24</td>
</tr>
<tr>
<td>Intervention centres</td>
<td></td>
<td>3.8</td>
<td>2.3</td>
<td>0.5-32</td>
</tr>
<tr>
<td>Non-intervention centres</td>
<td></td>
<td>5.8</td>
<td>3</td>
<td>0-24</td>
</tr>
</tbody>
</table>

* mean of means, weighted by number of patients waiting at each hospital
# median of mean waits

The figure shows mean waiting times by region. Numbers in parentheses are number of patients.
**Comment**

This snapshot survey of waiting times for in-patient cardiac and cardiac surgical procedures suggests that there may have been a further improvement in average waiting times since previous surveys in 2004 and 2005. Overall patients waiting for coronary arteriography and/or percutaneous coronary intervention waited an average of 1-2 days at hospitals with on-site access to interventional cardiology but around 3 days at hospitals without catheter laboratory access. Waiting times for implantation of cardiac devices and for cardiac surgery averaged around 4 and 10 days, respectively. We found no evidence that patients waiting for cardiac surgery at hospitals without on-site access to cardiac surgery were waiting substantially longer than patients at hospitals with on-site cardiac surgery.

The survey has some limitations as data were only collected on a single day in 2014 from selected NHS hospitals in England and Northern Ireland. We have reported average waiting times by hospital/NHS Trust that may mask both short and long waiting times for individual patients. The reasons patients were waiting for inpatient cardiac or cardiac surgical procedures were not explored and patients may have been waiting for valid clinical reasons that may have rendered them unfit for intervention, rather than for other non-clinical reasons. Any variation in mean waiting times between regions requires cautious interpretation as the number of patients waiting in each region was relatively small and reported waiting times may not be typical of waiting times in all of the participating regions.

Although not scientifically robust, the survey suggests that there may have been an improvement in waiting times for inpatient cardiac interventional and surgical procedures since previous surveys conducted by NHS Improvement in 2004 and 2005. The survey found no evidence of a difference in waiting times for patients admitted to hospitals with or without on-site cardiac surgery. We observed some regional variation in waiting times that merits further investigation.

British Cardiovascular Society

June 2015
### Appendix 1. Waiting time survey questionnaire:

#### Does your hospital provide:

- Coronary arteriography? **Yes / No**
- Percutaneous coronary intervention? **Yes / No**
- Cardiac surgery? **Yes / No**
- Permanent pacemaker implantation? **Yes / No**
- Other device implantation (ICD, CRT)? **Yes / No**

#### Does your hospital employ staff to coordinate scheduling and transfer of patients awaiting cardiac or cardiac surgical procedures? **Yes / No**

#### Does your hospital have a process for monitoring delays to cardiac or cardiac surgical procedures? **Yes / No**

#### On Wednesday 19th November 2014 how many patients in your hospital were waiting for inpatient:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Enter number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary arteriography (±follow-on PCI)?</td>
<td></td>
</tr>
<tr>
<td>Percutaneous coronary intervention?</td>
<td></td>
</tr>
<tr>
<td>Coronary artery bypass surgery?</td>
<td></td>
</tr>
<tr>
<td>Other cardiac surgery?</td>
<td></td>
</tr>
<tr>
<td>Device implantation (PPM, ICD, CRT)?</td>
<td></td>
</tr>
</tbody>
</table>

#### For patients waiting for cardiac or cardiac surgical procedures on 19th November 2014 how many days on average did patients wait for:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Enter number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary arteriography (±follow-on PCI)?</td>
<td></td>
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<tr>
<td>Percutaneous coronary intervention?</td>
<td></td>
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<tr>
<td>Coronary artery bypass surgery?</td>
<td></td>
</tr>
<tr>
<td>Other cardiac surgery?</td>
<td></td>
</tr>
<tr>
<td>Device implantation (PPM, ICD, CRT)?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2. Hospitals that contributed to the survey.

1. Airedale General Hospital
2. Altnagelvin Hospital Londonderry
3. Antrim Area Hospital Antrim
4. Barnsley District General Hospital
5. Basildon and Thurrock District General Hospital
6. Basingstoke & North Hampshire Hospital
7. Bedford Hospital
8. Belfast City Hospital Belfast
9. Blackpool Victoria Hospital
10. Bradford Royal Infirmary
11. Bristol Royal Infirmary
12. Calderdale Royal Hospital
13. Causeway Hospital Coleraine
14. Cheltenham General Hospital
15. Conquest Hospital
16. County Hospital Hereford
17. County Hospital Louth
18. Craigavon Area Hospital
19. Cumberland Infirmary
20. Daisy Hill Hospital Newry
21. Darlington Memorial Hospital
22. Dewsbury District Hospital
23. Dorset County Hospital
24. Downe Hospital Downpatrick
25. East Surrey Hospital
26. Epsom General Hospital
27. Essex Cardiothoracic Centre
28. Fairfield General Hospital - Pennine Acute
29. Friarage Hospital
30. Frimley Park Hospital
31. Furness General Hospital
32. Gloucestershire Royal Hospital
33. Grantham & District Hospital
34. Great Western Hospital, Swindon
35. Halton General Hospital
36. Harrogate District Hospital
37. Huddersfield Royal Infirmary
38. James Cook University Hospital
39. King George Hospital
40. King’s College Hospital
41. Kings Mill Hospital
42. Kingston Hospital
43. Lagan Valley Hospital Lisburn
44. Leeds General Infirmary
45. Leigh Infirmary
46. Lincoln County Hospital
47. Lister Hospital, Stevenage
48. London Chest Hospital
49. Maidstone Hospital
50. Manchester Royal Infirmary
51. Mater Infirmorium Hospital Belfast
52. Milton Keynes Hospital
53. Newham University Hospital
54. North Manchester General Hospital
55. Nottingham City Hospital
56. Peterborough City Hospital
57. Pilgrim Hospital
58. Pinderfields Hospital
59. Pontefract Hospital
60. Poole Hospital
61. Princess Alexandra Hospital
62. Princess Royal University Hospital
63. Queen Alexandra Hospital Portsmouth
64. Queen Elizabeth Hospital Kings Lynn
65. Queen Elizabeth II Hospital
66. Queens Hospital Romford
67. Royal Albert Edward Infirmary
68. Royal Blackburn Hospital
69. Royal Bolton Hospital
70. Royal Bournemouth Hospital
71. Royal Cornwall Hospitals NHS Trust
72. Royal Derby Hospital
73. Royal Devon & Exeter NHS Foundation Trust
74. Royal Hampshire County Hospital
75. Royal Lancaster Infirmary
76. Royal Liverpool University Hospital
77. Royal London Hospital
78. Royal Oldham Hospital
79. Royal Surrey County Hospital
80. Royal United Hospital Bath
81. Royal Victoria Hospital Belfast
82. Salford Royal Hospital
83. Salisbury District Hospital
84. South Devon Healthcare NHS Foundation Trust
85. South West Acute Hospital Enniskillen
86. Southampton General
87. Southend University Hospital
88. St Bartholomews Hospital
89. St Mary's Hospital Newport
90. St Peter's Hospital
91. St Richards Hospital Chichester
92. Stepping Hill Hospital
93. Sunderland Royal Hospital
94. Tameside General Hospital
95. The Alexandra Hospital
96. The Ipswich Hospital
97. Ulster Hospital Dundonald
98. University Hospital Coventry
99. University Hospital Lewisham
100. University Hospital Of North Durham
101. University Hospital of North Tees
102. University Hospital Queens Medical
103. Warrington Hospital
104. Watford General Hospital
105. West Cumberland Hospital
106. West Suffolk Hospital
107. Whipps Cross University Hospital
108. Whiston Hospital
109. Wythenshawe Hospital
110. York District Hospital